Beyond active vs. passive: Taking a less-traveled road to equity alpha

The ongoing active-vs.-passive decision is posing as urgent a challenge as ever to equity investors. Increasingly, allocators are turning to passive equity exposure in areas of the market they deem efficient—most commonly large cap, where the efficiency of the category has not lent itself to readily available outperformance potential. And yet large-cap equity frequently represents too sizable a portion of one’s asset allocation in which to deliberately forgo the opportunity for much-needed excess returns.

If neither approach is adequately fulfilling investors’ objectives, could there be a third choice that better addresses the need for alpha potential?

Our answer is yes. We propose combining passive exposure with an options-based return-enhancement strategy to create a portfolio with meaningful, sustainable excess-return potential that is otherwise elusive in efficient asset classes. A risk-managed option overlay that aims to generate outperformance with low correlation to the underlying beta portfolio has the potential to give investors a powerful advantage: The ability to pursue excess returns in the large allocation categories in which they had already resigned themselves to receiving simply index-like results.

Options-based return enhancement can offer the following benefits:
- **Transparency:** Positions are clearly delineated
- **No borrowing:** Positions require no financial leverage
- **Low correlation:** Portfolios are constructed to behave independently of market direction
- **Versatility:** The alpha engine can be used to enhance a wide range of beta exposures.

Key takeaways

- The ongoing active-vs.-passive debate poses a challenge to equity investors, with many turning to passive exposure in market areas deemed more efficient, namely large cap.

- Yet large-cap equity often represents too sizable a portion of one’s asset allocation to deliberately forgo the opportunity for alpha generation.

- We believe that a combination of passive exposure with an options-based alpha engine can offer a more enticing “third way” for investors to harvest sustainable alpha potential in a category in which many have already resigned themselves to receiving index-like results.

- Our case study illustrates how an options-based strategy can enhance returns on a risk-adjusted basis, even when implemented incrementally.
In the remainder of this paper, we will put forth how we structure our risk-managed equity-options alpha engine, and offer a case study showcasing how the strategy could impact the overall performance of an institutional equity portfolio.

**Constructing a return-enhancement Portfolio**

So how does our strategy provide an alternative to traditional active and passive investing?

As shown in Exhibit 1, let’s start with a hypothetical investor looking to shift $100,000,000 from their passive U.S. large-cap equity portfolio to our options-based strategy, which seeks to enhance the S&P 500 NR Index by 250 basis points per year net of fees. (Note that alpha targets can be scaled up or down, commensurately with expected tracking-error levels.)

The first step is to gain the desired beta exposure by allocating the entire capital to a passive vehicle, which, in our example, will be a physical replication of the S&P 500 NR Index. We would then use that exposure as margin collateral for any short option positions, which typically require only 10% to 15% of the underlying collateral based on a 250 bps net target.

Unlike “portable alpha” approaches, our option portfolio offers a consistent and transparent process: At all times, investors know where and how their money is invested. We also do not use financial leverage and are not susceptible to a rise in borrowing costs, another key differentiator.

**Building the alpha engine**

The next step is to build the option positions that will help enhance the beta performance. First, a word on risk: While options can be used to take risk in pursuit of returns, they can just as commonly be used to manage risk. Think of put options, for example, as insurance policies for equity investors. Sometimes it is advantageous to be the owner of the insurance policy, while other times it is advantageous to be the insurance company selling the policy. With our investment approach, we aim to be both.

Indeed, one of the most unique characteristics of our approach is the combination of both long- and short-volatility positions at all times. The option portfolio seeks to capitalize on the return-generating features of selling options (short volatility) while simultaneously benefiting from the risk-management attributes associated with buying options (long volatility) and to continually optimize the balance between these two types of exposures.

We carefully construct a diversified set of index option positions: Some are designed to profit when equity markets are behaving normally; others are meant to benefit only in the event of a large index move; and still others whose purpose is to provide protection in the event of a market crash.

**Exhibit 1: Enhancing an equity portfolio with an options-based alpha engine involves the implementation of an overlay combined with a choice of passive exposure**

<table>
<thead>
<tr>
<th>Investment of $100 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team replicates $100 million of S&amp;P 500 exposure</td>
</tr>
<tr>
<td>current preferred method: physical replication, i.e. buying stocks on the S&amp;P 500 Index</td>
</tr>
<tr>
<td>Collateral value of assets based on broker stress test</td>
</tr>
<tr>
<td>methodology is $80-$90 million</td>
</tr>
<tr>
<td>Return-Enhancement portfolio is constructed</td>
</tr>
<tr>
<td>only $10-$15 million of margin is needed, offering collateral flexibility</td>
</tr>
<tr>
<td>Index return + Alpha engine</td>
</tr>
</tbody>
</table>

During any given stage of the investment process the selection criteria may vary from those shown above. The diagram and statements above reflect the typical investment process applied to this strategy. At any given time other criteria may affect the investment process. Note that in order to manage any of the Structured Alpha strategies, AllianzGI will need collateral for the options contracts. In the event that, over a continued period of time, there is a sustained loss in closeout of the options contracts, there is a risk that assets used as collateral for the options would need to be utilized to cover the loss incurred from the closeout of the options contracts.
The interaction of the various position types is structured to enable the portfolio to exhibit low or no correlation to other asset classes over time. In addition, because the number of long puts always exceeds the number of short puts, under no scenario can an equity-market decline cause our portfolio to experience a margin call, a crucial differentiator from many option strategies.

**Portfolio behaviour**

From a risk perspective, Exhibit 2 illustrates how our portfolio is expected to behave over the short term during different market environments. But over a multi-month period, the strategy is designed to deliver on its investment objectives regardless of market conditions. At times of market stress, the performance of the option portfolio could become choppier in the short term, but these environments are often quite favorable for the portfolio overall. The insurance analogy is particularly relevant here.

*Exhibit 2: Over a multi-month period, the options alpha engine should exhibit low to no correlation to other asset classes*

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>– Portfolio expected to outperform in line with its stated return target</td>
</tr>
<tr>
<td>Volatile</td>
<td>– Potential for higher outperformance, lower active risk</td>
</tr>
<tr>
<td>Rapid change from low to high volatility</td>
<td>– The portfolio could underperform for a few weeks</td>
</tr>
<tr>
<td></td>
<td>– Higher volatility levels should enable greater potential outperformance in subsequent months</td>
</tr>
<tr>
<td>Rapid change from high to low volatility</td>
<td>– Higher return potential over a few weeks</td>
</tr>
<tr>
<td></td>
<td>– Lower volatility levels would bring return potential back to normal levels of expected outperformance</td>
</tr>
</tbody>
</table>

The information above is for illustrative purposes only and not intended to show a certain rate of return or even imply that an investor should expect a positive return. There is no guarantee that expectations will be achieved. Past performance is not indicative of future results. See additional disclosure at the end of this document.

**Our Strategy in Action**

To illustrate the impact of our options-based alpha engine on a typical passive equity portfolio, we have developed a case study based on actual past relative performance.

As shown in Exhibit 3, the alpha engine was able to enhance returns by 2.7% per annum during the analysed period (five years ending 31 August 2018), with a tracking error of 1.42, translating into an information ratio of 1.87. And while we recognize that the past few years have shown a comparatively lower level of volatility marketwide, our 13 years of experience in managing this option portfolio indicates that the strategy was capable of efficient alpha generation even if the tracking error were to increase.

In our view, an information ratio greater than 1.0 could be expected over a market cycle, which we attribute not only to the strength of our approach but also to the inefficiency and alpha opportunity that the options market provides.

Taking our example one step further, we also compared the impact the alpha engine would have when added to a passive strategy incrementally. Exhibit 3 illustrates how risk/return characteristics evolve under three hypothetical scenarios where the option overlay portfolio is combined with a 20%, 40% and 60% allocation of the overall portfolio.
**Exhibit 3: Adding our options-based strategy to a passive portfolio improved return per unit of risk**

<table>
<thead>
<tr>
<th>Portfolio A (S&amp;P 500)</th>
<th>Portfolio B (US Equity 250)</th>
<th>Portfolio C (80% S&amp;P / 20% US Equity 250)</th>
<th>Portfolio D (60% S&amp;P / 40% US Equity 250)</th>
<th>Portfolio E (40% S&amp;P / 60% US Equity 250)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returns 5 Years</td>
<td>14.5%</td>
<td>17.2%</td>
<td>15.1%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Excess Returns 5 Years</td>
<td>-</td>
<td>2.7%</td>
<td>0.6%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Standard Deviation 5 Years</td>
<td>9.6</td>
<td>10.5</td>
<td>9.8</td>
<td>9.9</td>
</tr>
<tr>
<td>Alpha Engine Contribution to Standard Deviation 1</td>
<td>-</td>
<td>0.9</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Tracking Error 5 Years</td>
<td>-</td>
<td>1.42</td>
<td>0.33</td>
<td>0.57</td>
</tr>
<tr>
<td>Information Ratio 5 Years</td>
<td>-</td>
<td>1.87</td>
<td>1.86</td>
<td>1.86</td>
</tr>
</tbody>
</table>

1Expressed in percentage points.

We utilised the total return of the S&P 500 Index and the Structured Alpha US Equity 250 composite (described above as S&P 500+Alpha Engine) as the basis of the analysis, which reflects the five-year period ended 31 August 2018. Performance statistics denote total return (i.e., the performance of the underlying S&P 500 Index beta plus the excess return generated by the alpha engine). Standard Deviation calculations are based on monthly returns. All performance is shown net of fees. Past performance is not indicative of future results. Portfolios C-E above represent the hypothetical results of blending the Structured Alpha US Equity 250 composite with the S&P 500 Index in the respective allocations for the five-year period ending 31 August 2018. Hypothetical data results have certain inherent limitations. Unlike the results shown in an actual performance record, these results do not represent actual trading. No representation is being made that any account will or is likely to achieve profits or losses to those being shown. Hypothetical results are not necessarily indicative of future performance and performance may be volatile. Actual returns may be higher or lower. See hypothetical performance disclosure at the end of this document for additional information.

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**Conclusion**

The debate between active and passive investments seems inadequate for the challenges and market conditions investors are facing today. Instead, we believe there is a third, better way—via a risk-managed option overlay—for investors to pursue outperformance in their equity portfolio.

We believe that based on its low correlation over time to other asset classes, this type of strategy can be a meaningful diversifier for investors. Our case study corroborates this view by showing increasing improvement in portfolio efficiency as the alpha engine is incrementally added to the equity exposure.
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short notice other assets in the portfolio.
margin payments. To meet the margin requirements (or the payment obligation upon exercise of an uncovered put) the writer may have to liquidate on
has additional risk, in that if the underlying instrument moves against an uncovered position, the option writer may have to make significant additional
price, with the maximum loss incurred where the underlying instrument value falls to zero. In the case of any uncovered option, the writer of the option
above the exercise price. The writer of an uncovered call option bears a risk of loss if the value of the underlying instrument declines below the exercise

uncovered call writing is unlimited. The writer of an uncovered call may incur large losses if the value of the underlying instrument increases significantly

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